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# SPACE OPERATIONS CONTROL CENTER

## SATELLITE SITUATION REPORT,

VOL. 3, NO. 22

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GODDARD SPACE FLIGHT CENTER,

GREENBELT, MD.

SPACE OPERATIONS CONTROL CENTER  
GODDARD SPACE FLIGHT CENTER  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 3 NO. 22

NOVEMBER 15, 1963

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED BY THE  
GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN ASTROPHYSICAL  
OBSERVATORY AS OF 1200Z ON NOVEMBER 15, 1963.

OBJECT	CODE NAME	SOURCE	OBJECTS IN ORBIT		INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
			LAUNCH	NODAL PERIOD				
1958 LAUNCHES								
ALPHA 1	EXPLORER 1	US	1 FEB	104.7	33.19	1638	338	108.017 &
BETA 1	ROCKET BODY	US	17 MAR	138.2	34.24	4319	651	
BETA 2	VANGUARD 1	US	17 MAR	133.8	34.23	3954	638	
1959 LAUNCHES								
ALPHA 1	VANGUARD 2	US	17 FEB	125.3	32.88	3275	571	0.9766AU 0.9871AU
ALPHA 2	ROCKET BODY	US	17 FEB	129.5	32.90	3688	531	
ETA 1	VANGUARD 3	US	18 SEP	129.7	33.34	3762	471	
MU 1*	LUNIK 1	USSR	2 JAN	450 D	0.01	1.315AU		
NU 1*	PIONEER 4	US	3 MAR	398 D	1.30	1.142AU		
IOTA 1	EXPLORER 7	US	13 OCT	101.1	50.31	1075	552	
IOTA 2	ROCKET BODY	US	13 OCT	100.9	50.31	1055	551	
1960 LAUNCHES								
ALPHA 1*	PIONEER 5	US	11 MAR	312 D	3.35	0.995AU	0.8061AU	
BETA 1	ROCKET BODY	US	1 APR	99.0	48.39	736	697	
BETA 2	TIROS 1	US	1 APR	99.1	48.40	748	692	
BETA 3	NONE	US	1 APR	97.8	48.48	705	610	
BETA 4	NONE	US	1 APR	99.8	48.14	804	703	
GAMMA 2	TRANSIT 1B	US	13 APR	94.0	51.27	590	360	
GAMMA 4	NONE	US	13 APR	96.7	51.23	725	482	
EPAILON 3	NONE	USSR	15 MAY	91.7	64.97	463	255	
ZETA 1	MIDAS 2	US	24 MAY	94.2	33.07	497	475	
ETA 1	TRANSIT 2A	US	22 JUN	101.6	66.69	1057	613	
ETA 2	GREB	US	22 JUN	101.6	66.69	1055	613	
ETA 3	ROCKET BODY	US	22 JUN	101.4	66.67	1037	613	
IOTA 1	ECHO 1	US	12 AUG	114.7	47.23	1836	1055	
IOTA 2	ROCKET BODY	US	12 AUG	118.0	47.25	1679	1509	
IOTA 3	METAL OBJECT	US	12 AUG	118.2	47.23	1700	1514	

OBJECT	OBJECTS IN ORBIT				SOURCE	LAUNCH	NODAL PERIOD	INCLINATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
	CODE NAME										
1960 LAUNCHES											
IOTA 4	METAL OBJECT	US	12 AUG	118.3	47.29	1692	1529	INSUFFICIENT OBSERVATIONS			
IOTA 5	METAL OBJECT	US	12 AUG	106.9	28.35	1226	952				
NU 1	COURIER 1B	US	4 OCT	106.4	28.28	1203	932				
NU 2	ROCKET BODY	US	4 OCT	112.3	49.97	2249	421				
XI 1	EXPLORER 8	US	3 NOV	111.9	49.97	2212	423				
XI 2	ROCKET BODY	US	3 NOV	109.5	49.36	2015	399				
XI 3	NONE	US	3 NOV	110.7	50.49	2105	419				
XI 4	NONE	US	3 NOV	98.2	48.50	740	609				
PI 1	TIROS 2	US	23 NOV	98.0	48.51	724	613				
PI 2	ROCKET BODY	US	23 NOV	98.1	48.52	729	613				
PI 3	NONE	US	23 NOV	98.2	48.49	735	620				
PI 4	NONE	US	23 NOV								
1961 LAUNCHES											
ALPHA 1	SAMOS 2	US	31 JAN	94.8	97.42	538	473				
ALPHA 2	METAL OBJECT	US	31 JAN	94.7	97.43	537	468				
GAMMA 1*	VENUS PROBE	USSR	12 FEB	300 D	0.58	1.019AU	0.7183AU				
DELTA 1	EXPLORER 9	US	16 FEB	113.2	38.96	2347	410				
DELTA 2	ROCKET BODY	US	16 FEB	118.4	38.85	2583	647				
DELTA 3	NONE	US	16 FEB	INSUFFICIENT OBSERVATIONS							
KAPPA 1	EXPLORER 10	US	25 MAR	POSITION UNCERTAIN							
NU 1	EXPLORER 11	US	27 APR	107.8	28.84	1768	496				
OMICRON 1	TRANSIT 4A	US	29 JUN	103.8	66.80	998	880				
OMICRON 2	INJUN-SR-3	US	29 JUN	103.8	66.80	997	882				
OMICRON 3-206**	METAL OBJECTS	US	29 JUN								
RHO 1	TIROS 3	US	12 JUL	100.3	47.90	790	765				
RHO 2	ROCKET BODY	US	12 JUL	100.3	47.92	799	751				
RHO 3	METAL OBJECT	US	12 JUL	98.8	47.92	788	620				
RHO 4	METAL OBJECT	US	12 JUL	101.9	47.84	942	766				
SIGMA 1	MIDAS 3	US	12 JUL	161.5	91.19	3573	3316				
SIGMA 3	METAL OBJECT	US	12 JUL	161.2	91.13	3556	3306				
SIGMA 4	METAL OBJECT	US	12 JUL	161.9	91.27	3578	3344				

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLI-NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1961 LAUNCHES								
UPSILON 1	EXPLORER 12	US	16 AUG	INSUFFICIENT OBSERVATIONS				
A DELTA 1	MIDAS 4	US	21 OCT	166.0	95.86	3769	3483	
A DELTA 3	METAL OBJECT	US	21 OCT	165.6	95.87	3723	3496	
A DELTA 4	METAL OBJECT	US	21 OCT	166.4	95.81	3782	3503	
A ETA 1	TRANSIT 4B	US	15 NOV	105.6	32.44	1105	957	
A ETA 2	TRAAC	US	15 NOV	105.6	32.43	1105	959	
A ETA 3	ROCKET BODY	US	15 NOV	105.5	32.43	1092	957	
1962 LAUNCHES								
ALPHA 1*	RANGER 3	US	26 JAN	406.4D	3988	1.163AU	0.9839AU	
ALPHA 2	ROCKET BODY	US	26 JAN	INSUFFICIENT OBSERVATIONS				
BETA 1	TIROS 4	US	8 FEB	100.3	48.30	868	684	
BETA 2	ROCKET BODY	US	8 FEB	101.3	48.13	934	712	
BETA 3	METAL OBJECT	US	8 FEB	99.4	48.40	768	699	
BETA 4	METAL OBJECT	US	8 FEB	100.2	48.30	828	719	
ZETA 1	ORB. SOL. OBS. 1	US	7 MAR	95.9	32.83	588	551	
ZETA 2	ROCKET BODY	US	7 MAR	95.9	32.81	578	562	
KAPPA 1		US	9 APR	153.0	86.68	3412	2783	
KAPPA 3		US	9 APR	152.7	86.66	3376	2786	
KAPPA 4		US	9 APR	153.4	86.66	3432	2791	
MU 2	ROCKET BODY	US	23 APR	INSUFFICIENT OBSERVATIONS				
OMICRON 1	ARIEL	US/UK	26 APR	100.6	53.86	1190	387	136.405
OMICRON 2	ROCKET BODY	US/UK	26 APR	100.5	53.84	1188	384	
SIGMA 1		US	15 MAY	89.6	82.32	269	232	
A ALPHA 1	TIROS 5	US	19 JUN	100.4	58.11	959	603	
A ALPHA 2	ROCKET BODY	US	19 JUN	100.4	58.11	950	605	
A ALPHA 3	METAL OBJECT	US	19 JUN	101.7	58.21	1056	617	
A ALPHA 4	METAL OBJECT	US	19 JUN	99.1	57.99	851	581	
A EPSILON 1	TELSTAR 1	US	10 JUL	157.7	44.80	5651	940	
A EPSILON 2	ROCKET BODY	US	10 JUL	157.6	44.78	5622	956	

OBJECT	OBJECTS IN ORBIT						TRANSMITTING FREQ. (MC/S)
	CODE NAME	SOURCE	LAUNCH	NODAL PERIOD	INCLI- NATION	APOGEE Km.	
1962 LAUNCHES							
A OMICRON 1		US	23 AUG	99.6	98.67	859	613
A OMICRON 2		US	23 AUG	98.3	98.69	752	598
A OMICRON 3		US	23 AUG	100.9	98.67	967	626
A OMICRON 4		US	23 AUG	99.6	98.69	860	611
A RHO 1*	MARINER 2	US	27 AUG	COMPUTATIONS IN PROGRESS			
A RHO 2*	ROCKET BODY	US	27 AUG	COMPUTATIONS IN PROGRESS			
A UPSILON 1		US	1 SEP	92.7	82.80	526	279
A PSI 1	TIROS 6	US	18 SEP	98.7	58.32	700	696
A PSI 2	ROCKET BODY	US	18 SEP	98.7	58.30	715	676
A PSI 3	METAL OBJECT	US	18 SEP	99.4	58.44	779	680
A PSI 4	METAL OBJECT	US	18 SEP	98.0	58.21	701	629
B ALPHA 1	ALOUETTE	CANADA	29 SEP	105.5	80.46	1038	995
							136.979; \$136.592
							\$136.077
B ALPHA 2	ROCKET BODY	US	29 SEP	105.5	80.47	1033	994
B ALPHA 3	METAL OBJECT	US	29 SEP	105.4	80.51	1027	995
B ALPHA 4	METAL OBJECT	US	29 SEP	105.5	80.44	1045	988
B GAMMA 1	EXPLORER 14	US	2 OCT	2184.6	40.85	96316	2473
B GAMMA 2	ROCKET BODY	US	2 OCT	INSUFFICIENT OBSERVATIONS			
B ETA 1*	RANGER 5	US	18 OCT	366D	.39011	1.052AU	.9490AU
B ETA 2*	ROCKET BODY	US	18 OCT	COMPUTATIONS IN PROGRESS			
B THETA 1		USSR	20 OCT	92.8	48.98	601	230
B KAPPA 1		US	26 OCT	139.7	71.53	4854	226
B LAMBDA 1	EXPLORER 15	US	27 OCT	314.3	17.98	17572	318
B LAMBDA 2	ROCKET BODY	US	27 OCT	INSUFFICIENT OBSERVATIONS			
B MU 1	ANNA 1 B	US	31 OCT	107.8	50.16	1188	1072
B MU 2	ROCKET BODY	US	31 OCT	107.6	50.17	1152	1082
B NU 3*		USSR	1 NOV	519 D	2.683	1.604AU	9237AU
B TAU 1		US	13 DEC	112.4	70.33	2438	232
B TAU 2		US	13 DEC	114.1	70.33	2593	237
B TAU 4		US	13 DEC	110.4	70.35	2261	231
							\$136.870

OBJECT	CODE NAME	SOURCE	OBJECTS IN ORBIT		INCLI - NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)	
			LAUNCH	NODAL PERIOD					
1962 LAUNCHES									
B TAU 5		US	13 DEC	112.3	70.32	2430	231	136.140; \$136.620	
B TAU 6		US	13 DEC	113.7	70.34	2556	235		
B UPSILON 1	RELAY 1	US	13 DEC	135.0	47.50	7441	1316		
B UPSILON 2	ROCKET BODY	US	13 DEC	184.7	47.73	7413	1326		
B CHI 1	EXPLORER 16	US	16 DEC	104.3	52.01	1195	735		
B PSI 1	TRANSIT 5A	US	19 DEC	99.1	90.63	737	692		
B PSI 2		US	19 DEC	97.8	90.73	736	568		
B PSI 3		US	19 DEC	99.1	90.63	732	697		
B PSI 4		US	19 DEC	100.3	90.48	831	706		
1963 LAUNCHES									
1963 3A		US	16 JAN	94.6	81.88	536	455	136.050	
1963 3C		US	16 JAN	92.6	81.87	420	376		
1963 4A	SYNCOM ROCKET BODY	US	14 FEB	1426.4	33.51	37016	34182		
1963 4B		US	14 FEB	604.4	33.12	4368.7	253		
1963 5A		US	19 FEB	97.8	100.50	803	496		
1963 5B		US	19 FEB	97.8	100.50	794	504		
1963 5C		US	19 FEB	97.0	100.51	764	463	136.892 136.415	
1963 5D		US	19 FEB	98.4	100.49	842	520		
1963 8B		USSR	2 APR	COMPUTATIONS IN PROGRESS					
1963 9A	EXPLORER 17	US	3 APR	95.7	57.62	857	250		
1963 9B	ROCKET BODY	US	3 APR	90.3	57.51	369	214		
1963 13A	TELSTAR 2	US	7 MAY	225.2	42.76	10812	967		
1963 13B	ROCKET BODY	US	7 MAY	225.1	42.74	10798	967		
1963 14A		US	9 MAY	156.5	87.37	3680	3609		
1963 14B		US	9 MAY	166.5	87.35	3673	3618		
1963 14C		US	9 MAY	166.5	87.34	3682	3608		
1963 14D		US	9 MAY	166.5	87.36	3676	3611		
1963 14E		US	9 MAY	166.1	87.47	3669	3591		
1963 14F		US	9 MAY	166.9	87.34	3697	3623		
1963 14G		US	9 MAY	166.5	87.35	3659	3629		

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLINATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1963 LAUNCHES								
1963 17A		USSR	22 MAY	93.9	48.96	697	245	
1963 17C		USSR	22 MAY	95.3	49.19	746	328	
1963 17G		USSR	22 MAY	92.7	48.99	577	246	
1963 22A		US	16 JUN	99.8	90.01	753	735	150;400
1963 22B		US	16 JUN	99.8	90.02	763	724	
1963 22C		US	16 JUN	101.3	90.21	889	745	
1963 22D		US	16 JUN	98.2	89.83	765	578	
1963 24A	TIROS 7	US	19 JUN	97.4	58.24	655	617	136.233;136.992
1963 24B	ROCKET BODY	US	19 JUN	97.3	58.23	659	606	
1963 24C	METAL OBJECT	US	19 JUN	97.9	58.37	680	635	
1963 24D	METAL OBJECT	US	19 JUN	96.9	58.10	652	569	
1963 25B		US	27 JUN	132.5	82.15	4124	336	
1963 26A	RESEARCH SATELLITE FOR GEOPHYSICS	US	28 JUN	102.0	49.73	1304	414	
1963 27A		US	29 JUN	94.8	82.31	524	487	
1963 27B		US	29 JUN	94.3	82.30	488	480	
1963 30A		US	19 JUL	167.9	88.37	3765	3638	
1963 30B		US	19 JUL	167.9	88.41	3730	3673	136.891
1963 30C		US	19 JUL	167.5	88.37	3730	3644	
1963 30D		US	19 JUL	168.0	88.50	3824	3589	
1963 30E		US	19 JUL	168.3	88.42	3765	3673	
1963 31A	SNYCOM 2	US	26 JUL	1436.0	33.16	35811	35761	\$136.980;\$136.468 \$1814.069;\$1815.794 \$1820.177
1963 31B		US	26 JUL	627.0	33.15	35544	255	
1963 33A	ROCKET BODY	USSR	6 AUG	91.4	49.02	443	254	
1963 33B		USSR	6 AUG	90.3	49.04	343	243	
1963 38A		US	28 SEP	107.1	89.91	1118	1065	
1963 38B		US	28 SEP	107.4	89.91	1139	1070	
1963 38C		US	28 SEP	107.4	89.91	1136	1071	136.650
1963 38D		US	28 SEP	107.4	89.91	1137	1071	



OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLINATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1963 LAUNCHES								
1963 39A		US	17 OCT		INSUFFICIENT OBSERVATIONS			
1963 39B		US	17 OCT		INSUFFICIENT OBSERVATIONS			136.530 &
1963 42A		US	29 OCT	90.7	89.90	338	274	
1963 42B		US	29 OCT	93.4	89.96	570	302	
1963 43A	POLYOT 1	USSR	1 NOV	102.4	58.87	1420	331	
1963 43B		USSR	1 NOV	102.4	58.57	1420	327	
1963 43C		USSR	1 NOV	101.4	58.91	1358	292	
1963 43D		USSR	1 NOV	102.1	59.78	1389	328	

- \* APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.
- \*\* TWO HUNDRED AND FOUR METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
- \$ TRANSMITTING ON COMMAND ONLY.
- & TRANSMITTING WHEN IN SUNLIGHT ONLY.

PLEASE ADD THE FOLLOWING TO THE DECAYED OBJECTS LIST

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1963 3B		US	16 JAN	8 NOV 63
1963 35A		US	29 AUG	7 NOV 63
1963 40B	COSMOS 20	USSR	18 OCT	30-31 OCT 63
1963 44A	COSMOS 21	USSR	11 NOV	14 NOV 63
1963 44B		USSR	11 NOV	12 NOV 63